The following Listing of Claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (Previously Amended) A rotor comprising:

a rotor core having a rotor surface;

a plurality of permanent magnets embedded in the rotor core with each of the permanent magnets having a pair of poles,

a plurality of first non-magnetic layers with one of the first non-magnetic layers being located between each adjacent pairs of the permanent magnets along the rotor surface and being continuous or adjacent to a peripheral edge section of each of the permanent magnets in a vicinity between the poles and a vicinity of the rotor surface; and

a plurality of second non-magnetic layers with one of the second non-magnetic layers being located a vicinity of the rotor surface at a pole center side position with respect to the peripheral edge section of each of the permanent magnets or the first non-magnetic layers,

the first non-magnetic layers and the second non-magnetic layers being positioned to cancel n-th order harmonics (where n is an odd number and is equal to or greater than 3) of an induction voltage.

2. (Previously Amended) The rotor as set forth in claim 1, wherein

the n-th order harmonics is an odd numbered order harmonics, the odd number being equal to or greater than 3 and other than multiples of 3.

3. (Previously Amended) The rotor as set forth in claim 1, wherein

the n-th order harmonics is an odd numbered order harmonics, the odd number being equal to or greater than 13 and other than multiples of 3.

4. (Previously Amended) The rotor as set forth in claim 2, wherein

the n-th order harmonics is 5-th order harmonics or 7-th order harmonics.

5. (Previously Amended) The rotor as set forth in claim 4, wherein

the peripheral edge section of each of the permanent magnets or the first non-magnetic layers and the second non-magnetic layers are independent from one another, and the rotor core is interposed between them.

6. (Previously Amended) The rotor as set forth in claim 4, wherein

an angle $\theta 1$ between the peripheral edge section of each of the permanent magnets or a pole center side edge section of the rotor surface adjacent each of the first non-magnetic layers and the poles, and an angle $\theta 2$ between the pole center side edge section of the rotor surface adjacent each of the second non-magnetic layers and the poles, are determined to be

$0 < \theta 1 < 180/(5 \cdot Pn)$ and $180/(5 \cdot Pn) \leqq \theta 2 \leqq 180 \times 2/(5 \cdot Pn)$

or

$0 < \theta 1 < 180/(7 \cdot Pn)$ and $180/(7 \cdot Pn) \leqq \theta 2 \leqq 180 \times 2/(7 \cdot Pn)$

where a pole pair number is Pn.

7. (Currently Amended) The rotor as set forth in claim 6, wherein

the angle $\theta 1$ ~~is $0 < \theta 1 < 180/(5 \cdot Pn)$ or $0 < \theta 1 < 180/(7 \cdot Pn)$,~~ and the angle $\theta 2$ satisfy either ~~is the minimum value of $180/(5 \cdot Pn) \leqq \theta 2 \leqq 180 \times 2/(5 \cdot Pn)$~~

<u>$0 < \theta 1 < 180/(5 \cdot Pn)$ and $\theta 2 = 180/(5 \cdot Pn)$</u>

or

~~the minimum value of $180/(7 \cdot Pn) \leqq \theta 2 \leqq 180 \times 2/(7 \cdot Pn)$~~

<u>$0 < \theta 1 < 180/(7 \cdot Pn)$ and $\theta 2 = 180/(7 \cdot Pn)$</u>.

8. (Previously Amended) The rotor as set forth in claim 4, wherein

an angle $\theta 5$ between the peripheral edge section of each of the permanent magnets or a pole center side edge section of the rotor surface adjacent each of the first non-magnetic layers and the poles, and an angle $\theta 6$ between the pole center side edge section of the rotor surface adjacent each of the second non-magnetic layers and the poles, are determined to be

$$0 < \theta 5 < 180/(5 \cdot Pn) \text{ and } 180/(5 \cdot Pn) \leqq \theta 6 \leqq 180 \times 2/(5 \cdot Pn)$$

where a pole pair number is Pn, and

a rotor core section width has points of inflection, the rotor core section width being sandwiched by the peripheral edge section of each of the permanent magnets or the first non-magnetic layers and the second non-magnetic layers and the rotor surface,

angles $\theta 7$ and $\theta 8$ between respective points of inflection and between poles are determined to be

$$0 < \theta 7 < 180/(7 \cdot Pn) \text{ and } 180/(7 \cdot Pn) \leqq \theta 8 \leqq 180 \times 2/(7 \cdot Pn)$$

where a pole pair number is Pn, and

a relationship of the angles $\theta 5$, $\theta 6$, $\theta 7$ and $\theta 8$ is determined to be

$\theta 7 < \theta 5 < \theta 8 < \theta 6$.

9. (Currently Amended) The rotor as set forth in claim 8, wherein

the angle θ 5 is $0 < \theta 5 < 180/(5 \cdot Pn)$, the angle θ 7 is $0 < \theta 7 < 180/(7 \cdot Pn)$, the angle θ 6 is ~~the minimum value of~~ $180/(5 \cdot Pn)$ $\cancel{\leqq \theta 6 \leqq 180 \times 2/(5 \cdot Pn)}$, and the angle θ 8 is ~~the minimum value of~~ $180/(7 \cdot Pn)$ $\cancel{\leqq \theta 8 \leqq 180 \times 2/(7 \cdot Pn)}$.

10. (Currently Amended) The rotor as set forth in claim 1, wherein

each of the permanent magnets is divided into multiple layers in a radial direction.

11. (Previously Amended) The rotor as set forth in claim 10, wherein

each of the permanent magnets is divided into two layers in a radial direction, and an angle θ 3 between the peripheral edge section of the permanent magnet in an inner side of the rotor or a pole center side edge section of a rotor surface adjacent each of the first non-magnetic layers and the poles, and an angle θ 4 between the peripheral edge section of the permanent magnet in an outer side of the rotor or the pole center side edge section of the rotor surface adjacent section of the first non-magnetic layers and the poles are determined to be

$$0 < \theta 3 < 180/(5 \cdot Pn) \text{ and } 180/(5 \cdot Pn) \leqq \theta 4 \leqq 180 \times 2/(5 \cdot Pn)$$

or

$$0 < \theta 3 < 180/(7 \cdot Pn) \text{ and } 180/(7 \cdot Pn) \leqq \theta 4 \leqq 180 \times 2/(7 \cdot Pn)$$

where a pole pair number is Pn.

12. (Currently Amended) The rotor as set forth in claim 11, wherein

the angle θ 3 $\cancel{\text{is } 0 < \theta 3 < 180/(5 \cdot Pn) \text{ or } 0 < \theta 3 < 180/(7 \cdot Pn),}$ and the angle θ 4 <u>satisfy either</u> ~~is the minimum value of~~ $\cancel{180/(5 \cdot Pn) \leqq \theta 4 \leqq 180 \times 2/(5 \cdot Pn)}$

$\underline{0 < \theta 3 < 180/(5 \cdot Pn) \text{ and } \theta 4 = 180/(5 \cdot Pn)}$

or

~~the minimum value of 180/(7 • Pn) ≦ θ 4 ≦ 180×2/(7 • Pn)~~

$\underline{0 < \theta 3 < 180/(7 \cdot Pn) \text{ and } \theta 4 = 180/(7 \cdot Pn)}$.

13. (Previously Amended) The rotor as set forth in claim 10, wherein

each of the permanent magnets is divided into two layers in a radial direction, and an angle $\theta 9$ between a pole center side edge section of the rotor surface adjacent each of the permanent magnets in an inner side of the rotor and the poles, and an angle $\theta 10$ between the pole center side edge section of the rotor surface adjacent each of the permanent magnets in an outer side of the rotor and the poles are determined to be

$$0 < \theta 9 < 180/(5 \cdot Pn) \text{ and } 180/(5 \cdot Pn) \leqq \theta 10 \leqq 180 \times 2/(5 \cdot Pn)$$

where a pole pair number is Pn,

a rotor core section width has points of inflection, the rotor core section width being sandwiched by the peripheral edge sections of the permanent magnets on the inner side of the rotor or the first non-magnetic layers and the peripheral edge sections of the permanent magnets on the outer side of the rotor or the first non-magnetic layers, and

angles $\theta 11$ and $\theta 12$ between respective points of inflection and between poles are determined to be

$$0 < \theta 11 < 180/(7 \cdot Pn) \text{ and } 180/(7 \cdot Pn) \leqq \theta 12 \leqq 180 \times 2/(7 \cdot Pn)$$

where a pole pair number is Pn, and

a relationship of the angles $\theta 9$, $\theta 10$, $\theta 11$ and $\theta 12$ is determined to be $\theta 11 < \theta 9 < \theta 12 < \theta 10$.

14. (Currently Amended) The rotor as set forth in claim 13, wherein the angle θ 9 is $0 < \theta 9 < 180/(5 \cdot Pn)$, the angle θ 11 is $0 < \theta 11 < 180/(7 \cdot Pn)$, the angle θ 10 is ~~the minimum value of~~ $180/(5 \cdot Pn)$ ~~$\leqq \theta 10 \leqq 180 \times 2/(5 \cdot Pn)$~~, and the angle θ 12 is ~~the minimum value of~~ $180/(7 \cdot Pn)$ ~~$\leqq \theta 12 \leqq 180 \times 2/(7 \cdot Pn)$~~.

15. (Previously Presented) The rotor as set forth in claim 5, wherein an angle θ 1 between the peripheral edge section of each of the permanent magnets or a pole center side edge section of the rotor surface adjacent each of the first non-magnetic layers and the poles, and an angle θ 2 between the pole center side edge section of the rotor surface adjacent each of the second non-magnetic layers and the poles, are determined to be

$0 < \theta 1 < 180/(5 \cdot Pn)$ and $180/(5 \cdot Pn) \leqq \theta 2 \leqq 180 \times 2/(5 \cdot Pn)$

or

$0 < \theta 1 < 180/(7 \cdot Pn)$ and $180/(7 \cdot Pn) \leqq \theta 2 \leqq 180 \times 2/(7 \cdot Pn)$

where a pole pair number is Pn.

16. (Currently Amended) The rotor as set forth in claim 15, wherein the angle θ 1 ~~is $0 < \theta 1 < 180/(5 \cdot Pn)$ or $0 < \theta 1 < 180/(7 \cdot Pn)$,~~ <u>and</u> the angle θ 2 <u>satisfy either</u> ~~is the minimum value of $180/(5 \cdot Pn) \leqq \theta 2 \leqq 180 \times 2/(5 \cdot Pn)$~~

<u>$0 < \theta 1 < 180/(5 \cdot Pn)$ and $\theta 2 = 180/(5 \cdot Pn)$</u>

or

~~the minimum value of $180/(7 \cdot Pn) \leqq \theta 2 \leqq 180 \times 2/(7 \cdot Pn)$~~

<u>$0 < \theta 1 < 180/(7 \cdot Pn)$ and $\theta 2 = 180/(7 \cdot Pn)$</u>.

17. (Previously Presented) The rotor as set forth in claim 5, wherein

an angle $\theta 5$ between the peripheral edge section of each of the permanent magnets or a pole center side edge section of the rotor surface adjacent each of the first non-magnetic layers and the poles, and an angle $\theta 6$ between the pole center side edge section of the rotor surface adjacent each of the second non-magnetic layers and the poles, are determined to be

$$0 < \theta 5 < 180/(5 \cdot Pn) \text{ and } 180/(5 \cdot Pn) \leqq \theta 6 \leqq 180 \times 2/(5 \cdot Pn)$$

where a pole pair number is Pn,

a rotor core section width has points of inflection, the rotor core section width being sandwiched by the peripheral edge section of each of the permanent magnets or ~~each of~~ the first non-magnetic layers and the second non-magnetic layers and the rotor surface,

angles $\theta 7$ and $\theta 8$ between respective points of inflection and between poles are determined to be

$$0 < \theta 7 < 180/(7 \cdot Pn) \text{ and } 180/(7 \cdot Pn) \leqq \theta 8 \leqq 180 \times 2/(7 \cdot Pn)$$

where a pole pair number is Pn, and

a relationship of the angles $\theta 5$, $\theta 6$, $\theta 7$ and $\theta 8$ is determined to be

$$\theta 7 < \theta 5 < \theta 8 < \theta 6.$$

18. (Currently Amended) The rotor as set forth in claim 17, wherein

the angle $\theta 5$ is $0 < \theta 5 < 180/(5 \cdot Pn)$, the angle $\theta 7$ is $0 < \theta 7 < 180/(7 \cdot Pn)$, the angle $\theta 6$ is ~~the minimum value of~~ $180/(5 \cdot Pn)$ $\cancel{\leqq \theta 6 \leqq 180 \times 2/(5 \cdot Pn)}$, and the angle $\theta 8$ is ~~the minimum value of~~ $180/(7 \cdot Pn)$ $\cancel{\leqq \theta 8 \leqq 180 \times 2/(7 \cdot Pn)}$.

19. (Previously Presented) The rotor as set forth in claim 2 wherein each of the permanent magnets is divided into multiple layers in a radial direction.

20. (Previously Presented) The rotor as set forth in claim 19, wherein each of the permanent magnets is divided into two layers in a radial direction, and an angle $\theta 3$ between the peripheral edge section of the permanent magnet in an inner side of the rotor or a pole center side edge section of the rotor surface adjacent each of the first non-magnetic layers and the poles, and an angle $\theta 4$ between the peripheral edge section of the permanent magnet in an outer side of the rotor or the pole center side edge section of the rotor surface adjacent each of the first non-magnetic layers and the poles are determined to be

$$0 < \theta 3 < 180/(5 \cdot Pn) \text{ and } 180/(5 \cdot Pn) \leqq \theta 4 \leqq 180 \times 2/(5 \cdot Pn)$$

or

$$0 < \theta 3 < 180/(7 \cdot Pn) \text{ and } 180/(7 \cdot Pn) \leqq \theta 4 \leqq 180 \times 2/(7 \cdot Pn)$$

where a pole pair number is Pn.